

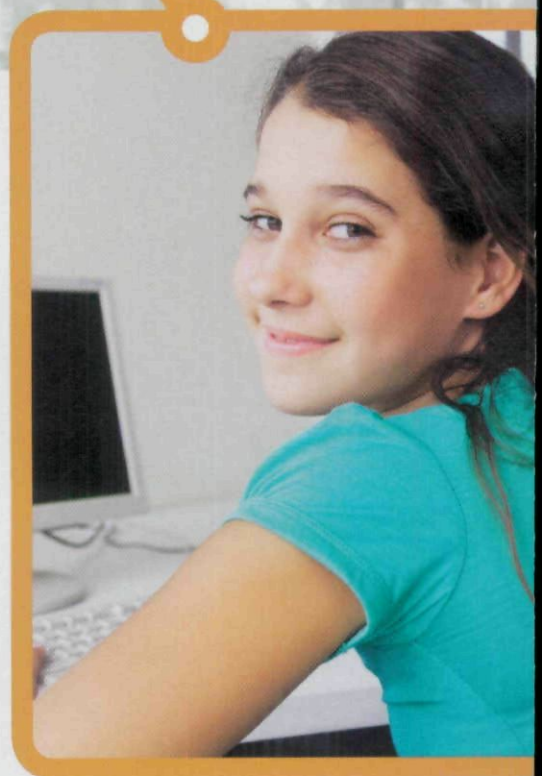
FEATURE



# Social Scholarship:

APPLYING SOCIAL NETWORKING  
TECHNOLOGIES TO RESEARCH PRACTICES

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Participatory web-based technologies have the potential to change the way we engage in scholarship. One reason Web 2.0 technologies, such as online social networking, are not widely integrated in PreK–12 and postsecondary education is the lack of modeling by educators. Our lack of research-based best practices limits our ability to capitalize on learners' engagement with Web 2.0 technologies outside of school to change formal Web 1.0 classroom-based lessons (Bull et al. 2008). Such a lack of knowledge prevents both novice and senior scholars from cultivating the "serious online lives" (Lankshear 2007) that would help them discern overly hyped from educative uses of participatory technologies.

Therefore, I propose to examine the concept and application of "social scholarship" and to provide examples for K–12 and postsecondary educators and students who seek to integrate social scholarship into their research practices. School librarians are already integrating social bookmarking into their library's webpages to provide lists of trusted resources for particular projects or activities. A community of learners can examine, share, and observe tag patterns across bookmarked material. This example, and those that follow, suggest how social scholarship might be implemented in educational settings to transform pedagogy, faculty-student relationships, and the very ideals underlying scholarly approaches.

" 'Go to my Delicious. Then we'll talk,' a professor told a student asking to meet with her... Delicious <<http://delicious.com>> is a social bookmarking service

that in its simplest appearance is a website of hot-linked bookmarks (similar to what is contained in your current Internet browser's bookmarks). However, Delicious also functions as a central, networked 'place' on the Internet where an individual's bookmarks and tags (similar to keywords) of important web-based information can be accessed...The professor, in this example, has begun to cultivate a scholarly life online through a Delicious

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site on which she has compiled vast amounts of multi-media information around particular topics. By consulting Delicious, the student is simultaneously preparing academically for a meeting with his professor while also watching her model the integration of participatory Internet technologies into her teaching, advising, and research practices" (Greenhow, Robelia, and Hughes 2009).

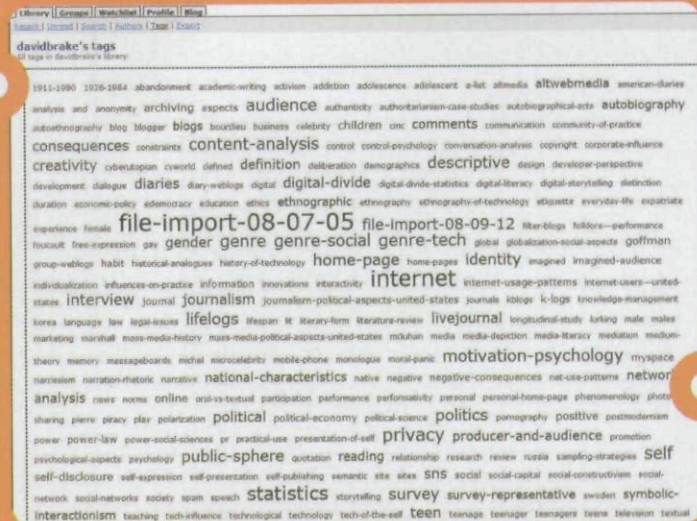
This example illustrates "social scholarship," a practice being debated within library sciences, education, communications, and other disciplines (Cohen 2007, Taraborelli 2008). Social scholarship applies Web 2.0 capabilities to change the ways in which academic learning is accomplished within social networks. It connects traditional "formal" scholarship practices such as writing a research essay with more informal, social web-based practices such as posting unfinished writing in an online collaborative space and inviting readers to comment or even contribute (see <[http://schoolcomputing.wikia.com/wiki/Why\\_We\\_Like\\_Diigo](http://schoolcomputing.wikia.com/wiki/Why_We_Like_Diigo)> or <<http://digitalwriting.pbwiki.com>> for examples). Social scholarly practices leverage and archive our collective intelligence. Social scholarship operates on principles such as "openness, conversation, collaboration, access, sharing, and transparent revision" (Cohen 2007). As educators and students reflect on and re-envision what they do as scholars—using web-based social networking tools to enact semi-public virtual selves and become intertwined with the work of their peers—their use of these tools may, in turn, provide greater insight into their own scholarly attitudes and practices. Let's look at some of the tools that provide social scholarship opportunities.

### Social Bibliography Sites

Several tools, similar to Delicious, allow educators and learners to assemble, annotate, recommend, and share resources, such as books, journal articles, websites, and contacts. Social bibliography sites—also called "social bookmarking" sites—such as CiteULike and Diigo not only allow students to



better document their trajectory on the Web, but also to archive and comment on resources they collect along the way. Social bibliography sites are "social" in that they allow users to browse other users' online bibliographies and interact with them. For example, David Brake is a communication and new media scholar at the London School of Economics who has assembled within CiteULike over 180 articles on blogging for a research essay he is writing (see <[www.citeulike.org/user/davidbrake](http://www.citeulike.org/user/davidbrake)>). He recently shared the URL for his CiteULike bibliography with colleagues and experts in his field through an e-mail discussion list, asking them to check and see that he had not missed anything important (Brake 2008). Students and educators might similarly invite feedback on their beginning web-based bibliographies. Learners interested in particular topics (for example, blogging) can use CiteULike to traverse the bibliographies of scholars such as Brake and "copy" entries from his list right into their own emerging bibliographies. Features also allow users to examine other users' tag and author clouds.<sup>1</sup> For example, David Brake's most cited authors are Lois Scheidt and Susan Herring. Students, in analyzing the tag and author clouds on the pages of known experts, can quickly get a sense of which keywords and authors may be most important to review. The "tags" Brake used to categorize his online journal citations, such as the "blogs" tag, are also copied into the student's bibliography. Clicking on these tags (for example, clicking on the "blog" tag) brings the user back to the original citation but also displays a clickable link to all other recent papers classified by the tag "blogs" in the CiteULike community.



The tag and author clouds in Delicious and CiteULike illustrate the importance of metadata. Taraborelli (2008) predicts that metadata analysis and ranking may eventually supplement the traditional peer review within print-based journal manuscripts by contributing a "soft peer review" based on how much an author's work is cited, tagged, or reviewed online. Combined with citation index data, soft peer review facilitated through websites like CiteULike could provide potentially valuable insights on scholarship's impact and applicability to a field. Emerging scholars not yet published in library journals may be identified through soft reviews, and such reviews could assist student researchers in finding valuable material in minor journals not available at their school or university libraries. Using social bibliography site tools, student researchers may learn from (and contribute to) a broader, more current and diverse set of perspectives than they would encounter in simply browsing traditional published resources. On the other hand, some scholars

argue that such Web research tools may actually have a "narrowing" effect on scholarship by tending to privilege the new and the popular; for instance, resources that might have been arbitrarily selected by users initially can be amplified, potentially reifying mediocre or false sources (Tuhus-Dubrow 2008).

Furthermore, within social bibliography sites, students can easily monitor and build on the efforts of other researchers who share their research interests. A student skimming through David Brake's page can click "watch" and, thereby, add his page to a "watchlist." CiteULike then aggregates all the papers from all pages on the user's watchlist and displays them on just one page in chronological order. Thus, students can quickly see what resources have been added since the last time they checked. In addition, CiteULike members can see who within the community has added the same resources. For example, thirty-four people and seventeen groups have cited Lave and Wenger's (1991) *Situated Learning: Legitimate Peripheral Participation*.

<sup>1</sup> The most frequently used words (author name or tag) appear visually larger and bolder in a cloud-like format.



Search results for: Situated Learning: Legitimate Peripheral Participation [more than 800 articles]

all entries on Citiculus meeting your search criteria.

Users interested in: Situated Learning: Legitimate Peripheral Participation  
 pliscovf Zephyrus misonnah tplocante nikko guhy rick ysh jzavbas oniquet schmoutz ganyfeng jsvobeda  
 Oynioia phlilpeent tyssil esharnde jyeon glivas lalygoat wrooshe bernardjo frinsien mosvold pvcratra hacspring phroam  
 cedricbodin ajones Sidor

Groups interested in: Situated Learning: Legitimate Peripheral Participation

- [CiteULike](#)
- [Diigo](#)
- [Delicious](#)
- [Dribbble](#)
- [Flickr](#)
- [Foursquare](#)
- [Google+](#)
- [Instagram](#)
- [LinkedIn](#)
- [Pinterest](#)
- [Twitter](#)
- [YouTube](#)

Articles discussing: Situated Learning: Legitimate Peripheral Participation

Hot article

[Situated Learning: Legitimate Peripheral Participation](#)

(27 September 1993)

by Jean Lave, Etienne Wenger

posted to [CiteULike](#) by [pliscovf](#) on 2009-04-02 17:22:42 as [situated learning: legitimate peripheral participation](#) and 22 others

[Situated Learning and Education](#)

EDUCATION: MONOGRAPH, vol. 21, no. 6, (1 May 1994), pp. 8-11.

by John A. Swainson, Lynne M. Radley, Herbert A. Noyes

posted to [CiteULike](#) by [jzavbas](#) on 2009-01-04 02:27:40 as [situated learning: legitimate peripheral participation](#) and 1 other

[Power Socialization Through Participation?](#)

Administrative Science Quarterly, vol. 38, no. 1, (2073), pp. 21-48.

by Philip Selznick

posted to [CiteULike](#) by [pliscovf](#) on 2009-04-27 20:23:55 as [situated learning: legitimate peripheral participation](#)

[Research for mobilization and backward awareness online interaction peripheral devices](#)

(2001), pp. 14-90.

by [pliscovf](#) on 2009-04-27 20:23:55 as [situated learning: legitimate peripheral participation](#)

Each time a reference is added to a user's bibliography it is marked with a user ID and date/time stamp, and these dynamically update, as in the case of Lave and Wenger above. Clicking on the hot-link "34 people and 17 groups" leads to the pages of others who have cited this resource.

Through such dynamic referencing, educators and students using CiteULike may become aware of new information, informally confirm the importance of a particular source, and even build relationships through the *research circuits* of others who cite similar materials. For example, in observing others' contributions related to reversing the recent precipitous worldwide decline in the amphibian population, a student interested in the topic may be motivated to post a comment or even contact others who share this interest and so begin a conversation. In these ways CiteULike puts principles of openness, collaboration, and sharing to work in the research process. However, the process is not without its pitfalls. Since materials in CiteULike bibliographic citations may not have gone through the formal peer-review process of print-based materials, students using CiteULike must read more critically

and work with instructors to develop criteria for vetting sources.

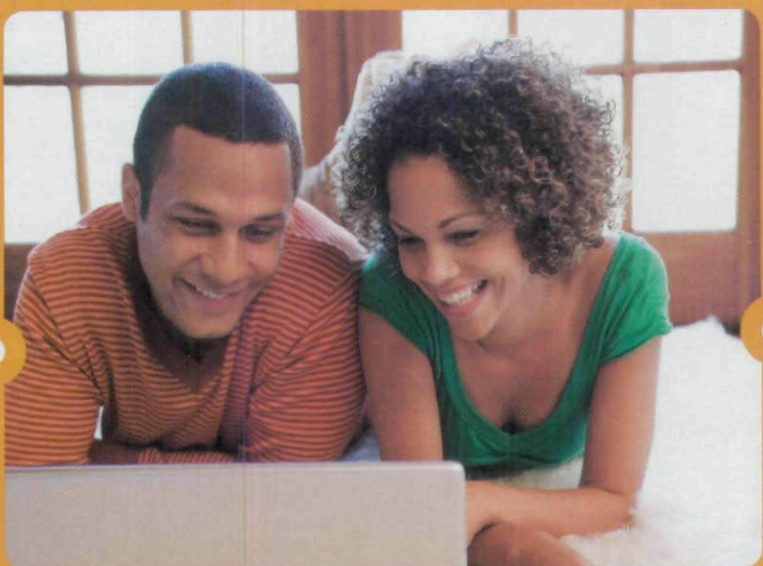
Another social bookmarking site Diigo <[www.diigo.com](http://www.diigo.com)> may actually encourage learners to develop critical, active reading habits as they practice social scholarship. Unlike Delicious or CiteULike, Diigo allows users to electronically highlight what they read, similar to using a yellow highlighter to mark up passages in a book. However, this electronic highlighting is simultaneously bookmarked, and Diigo allows users to tag, comment on, and share these markups with other readers. For example, a student interested in researching whether or not the Internet changes how we think, a topic recently featured in both popular media (Carr 2008) and published reports (University College London 2008), can use Diigo to read the online *Atlantic Monthly* article, "Is Google Making Us Stupid?", and highlight, tag, and comment on passages of interest. Using Diigo the student can also view highlighted sections and commentary created by hundreds of other readers. Diigo allows

users to leave private or public electronic "Post-it" notes, helping those who share similar interests to benefit from and contribute to pages other users visit and annotate. In the following example from the School Computing wiki <<http://schoolcomputing.wikia.com>>, a sixth grade teacher Demetri Orlando explains how he used Diigo to teach reading strategies and metacognition, competencies essential to the research process (2008).

"Last year, the sixth grade students mentioned in their end-of-year surveys that we read too much non-fiction... I decided to incorporate fairy and folk tales into our reading strategy instruction. I found two collections of tales online that suited our purposes. I used the Diigo for educators feature to set all the students up with an account...When it came time to assess the students' work I had such a fun time, it felt like I was reading the stories along with each of them...The kids used the tools built into Diigo to demonstrate their use of the reading strategies that we've been practicing with paper text. They showed their thinking throughout the stories by asking questions, reflecting, and analyzing the text by

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inserting these as comments onto the webpages they were reading. These comments are visible to their classmates via the Diigo group. This is a powerful tool for supporting and scaffolding metacognition. Diigo also supports my own metacognition as I come across webpages that have been annotated by my Diigo network, it deepens my thinking about the content to see how my students have responded to it" (Orlando et al. 2008).

As in the case of CiteULike, Diigo interactions can lead students to locate more people and resources relevant to their research topic, but unlike CiteULike, Diigo may actually help students become more deliberative, reflective, and critical in their social scholarly practices. Of course, a potential challenge in using collaborative bibliography tools with younger students is that students might plagiarize others' bibliographies. What works among ethical adults might be cause for problems among students with little interest in what they were studying.

## Conclusions

We've explored one aspect of "social scholarship" using examples of its application for K–12 and postsecondary educators and students. Trends in the United States and elsewhere suggest the importance of conceptualizing social scholarly practices, and developing and evaluating our capacity for their implementation among future generations of learners and educators. For instance, in the United States the Department of Education, the Department of Labor, and the National Science Foundation are coalescing around initiatives that build knowledge of the human-and-technology infrastructure, or *cyberinfrastructure*, needed to capitalize on dramatic advances in information technology (for example, the integration of distributed Internet networks, simulations, visualization tools, and software used and adapted by interdisciplinary teams world-wide) (Computing Research Association 2005). This coalition asserts that fewer and fewer individuals will be able to carry out their work without connecting to peers, experts, and mentors via electronic networks. Educators at both the K–12 and

postsecondary levels will play a critical role in helping to define and bring about this cyberinfrastructure needed for increased innovation, globalization, and knowledge networking. The conversation started in this article is meant as a step toward helping educators play this role.

Specifically, more work is needed to define social scholarship principles and methods, and to evaluate our use of collaborative research tools, such as those introduced here. In addition, we need further inquiry into the impact such tools have, not only on our research processes and outcomes, but on our fundamental beliefs about academic scholarship. Finally, as new developments in the social and semantic Web make such tools and practices ubiquitous, we may witness exciting and fundamental transformations in the ways in which scholarship is conceived, taught, and accomplished, as this concluding example from the New Media Consortium's 2008 *Horizon Report* suggests:

"Students working on research papers often do not fully realize what it means to be a scholar. Of the network of activities that scholars are involved in—writing, researching, interacting with peers and colleagues, presenting at conferences—only a small part is apparent to a student doing research. Every idea, paper,





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experiment, and artifact is, in reality, attached to a person or group of people who helped bring it about. Imagine the impact of tools that place those people and relationships at the center of any research inquiry: concepts clearly linked to people; connections

between those people and others clearly indicated; a much more complete picture of the topic would emerge, more quickly than is possible with current tools" (26).

I look to my colleagues to join me in advancing this conversation.

## Works Cited

- Brake, David. 2008. E-mail communication to discussion list. (September 11).
- Bull, Glen, Ann Thompon, Mike Searson, Joe Garofalo, John Park, Carl Young, and John Lee. 2008. "Connecting Informal and Formal Learning: Experiences in the Age of Participatory Media." *Contemporary Issues in Technology and Teacher Education* 8, no. 2. <<http://citejournal.org/vol8/iss2/editorial/article1.cfm>> (accessed July 1, 2008).
- Carr, Nicholas. 2008. "Is Google Making Us Stupid?" *The Atlantic* 301, no. 6 (July/August). <<http://www.theatlantic.com/doc/200807/google>> (accessed November 28, 2008).
- Cohen, Laura. 2007. "Social Scholarship on the Rise." *Library 2.0: An Academic's Perspective* (April 5). <[http://liblogs.albany.edu/library20/2007/04/social\\_scholarship\\_on\\_the\\_rise.html](http://liblogs.albany.edu/library20/2007/04/social_scholarship_on_the_rise.html)> (accessed December 30, 2008).
- Computing Research Association. 2005. *Cyberinfrastructure for Education and Learning for the Future: A Vision and Research Agenda*. <[www.cra.org/reports/cyberinfrastructure.pdf](http://www.cra.org/reports/cyberinfrastructure.pdf)> (accessed October 10, 2008).
- Greenhow, Christine, Beth Robelia, and Joan Hughes. "Web 2.0 and Educational Research: What Path Do We Take Now?" *Educational Researcher*. In press.
- Lankshear, Colin. 2007. "The 'Stuff' of New Literacies." Paper presented at the Mary Lou Fulton Symposium. April 24. Arizona State University. <[www.geocities.com/c.lankshear/stuff.pdf](http://www.geocities.com/c.lankshear/stuff.pdf)> (accessed January 19, 2009).
- Lave, Jean, and Etienne Wenger. 1991. *Situated Learning: Legitimate Peripheral Participation*. London: Cambridge University Press.
- New Media Consortium and EDUCAUSE Learning Initiative. 2008. *The Horizon Report 2008 Edition*. Austin, TX: The New Media Consortium. <[www.nmc.org/pdf/2008-Horizon-Report.pdf](http://www.nmc.org/pdf/2008-Horizon-Report.pdf)> (accessed September 30, 2008).
- Orlando, Demetri, Sarah Hanawald, Beth Ritter-Guth, Michèle Drechsler. 2008. "Why We Like Diigo." <[http://schoolcomputing.wikia.com/wiki/Why\\_We\\_Like\\_Diigo](http://schoolcomputing.wikia.com/wiki/Why_We_Like_Diigo)> (accessed November 30, 2008).
- Taraborelli, Dario. 2008. "Soft Peer Review: Social Software and Distributed Scientific Evaluation." *Proceedings of the 8th International Conference on the Design of Cooperative Systems (COOP 08)*. May 20-23. Carry-Le-Rouet, France. <[http://nitens.org/docs/spr\\_coop08.pdf](http://nitens.org/docs/spr_coop08.pdf)> (accessed October 3, 2008).
- Tuhus-Dubrow, Rebecca. 2008. "Group Think: The Turn to Online Research is Narrowing the Range of Modern Scholarship. A New Study Suggests." *The Boston Globe* (November 23). <[www.boston.com/bostonglobe/ideas/articles/2008/11/23/group\\_think/?page=full](http://www.boston.com/bostonglobe/ideas/articles/2008/11/23/group_think/?page=full)> (accessed November 28, 2008).
- University College London. 2008. "Information Behavior of the Researcher of the Future: A Cyberbriefing Paper." (January 11). <[www.bl.uk/news/pdf/googlegen.pdf](http://www.bl.uk/news/pdf/googlegen.pdf)> (accessed November 28, 2008).

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